

AMENDMENTS TO THE CLAIMS

1. (currently amended): A knee orthosis, comprising:
a medial tracking member that operatively fits along a lateral side of, and provides medial traction to, a patella having patellofemoral articular tissue; and
a concentrated, medial and ~~inwardposterior~~ traction member that operatively fits over, and provides concentrated, medial and ~~inwardposterior~~ pressure against, the patella;
wherein the concentrated, medial and ~~inwardposterior~~ traction member provides a compressive force against the patella, thereby increasing the contact surface area between the patellofemoral articular tissue and an associated femoral trochlear groove.
2. (currently amended): The knee orthosis of claim 1 wherein the concentrated, medial and ~~inwardposterior~~ pressure is applied through an intermittent and progressively increased tightening of the concentrated, medial and ~~inwardposterior~~ traction member.
3. (currently amended): The knee orthosis of claim 1 wherein the concentrated, medial and ~~inwardposterior~~ traction member directly overlays the patella and the medial tracking member so that medial traction can be placed on the patella.
4. (original): The knee orthosis of claim 1 wherein the medial tracking member is adjustable to increase or decrease an amount of medial traction.
5. (currently amended): The knee orthosis of claim 1 wherein the concentrated, medial and ~~inwardposterior~~ traction member is adjustable to increase or decrease an amount of inward pressure.
6. (currently amended): The knee orthosis of claim 1 wherein the concentrated, medial and ~~inwardposterior~~ traction member provides continuous compressive force against the patella throughout a full range of extension motion of an associated knee.
7. (original): The knee orthosis of claim 6 wherein the continuous compressive force is substantially the same throughout the extension motion.
8. (original): The knee orthosis of claim 6 wherein the continuous compressive force increases throughout the extension motion.

9. (original): The knee orthosis of claim 1 further comprising a polycentric hinge having an axis that maintains a parallel position with respect to an associated knee throughout a flexion or extension motion of the knee.
10. (currently amended): The knee orthosis of claim 9 wherein the polycentric hinge is bicentric and the concentrated, medial and ~~inwardposterior~~ traction member is operatively attached to the hinge and aligned substantially perpendicular to the hinge axis.
11. (currently amended): The knee orthosis of claim 10 wherein the concentrated, medial and ~~inwardposterior~~ traction member is mounted on the hinge, or operatively loops through a ring that is aligned parallel to the hinge axis.
12. (currently amended): The knee orthosis of claim 1 further comprising an elastic, breathable sleeve having attachment positions for anchoring and adjusting the medial tracking member and the concentrated, medial and ~~inwardposterior~~ traction member.
13. (original): The knee orthosis of claim 1 wherein the medial tracking member comprises a synthetic tube that is covered with an elastic material, a raised spacing member, or a raised extension member.
14. (original): The knee orthosis of claim 1 wherein the medial and ~~inwardposterior~~ traction member comprises an elastic, adjustable strap.
15. (currently amended): A knee orthosis, comprising:
a concentrated, medial and ~~inwardposterior~~ traction member that operatively fits over, and provides concentrated, medial and ~~inwardposterior~~ pressure against, a patella having patellofemoral articular tissue;
wherein the medial and ~~inwardposterior~~ traction member provides a compressive force against the patella, thereby increasing the contact surface area between the patellofemoral articular tissue and an associated femoral trochlear groove.
16. (currently amended): The knee orthosis of claim 15 wherein the concentrated, medial and ~~inwardposterior~~ pressure is applied through an intermittent and progressively increased tightening of the concentrated, medial and ~~inwardposterior~~ traction member.

17. (currently amended): The knee orthosis of claim 15 wherein the concentrated, medial and ~~inward~~posterior traction member directly overlays the patella and a medial tracking member so that medial traction can be placed on the patella.
18. (original): The knee orthosis of claim 15 wherein the medial tracking member is adjustable to increase or decrease an amount of medial traction.
19. (currently amended): The knee orthosis of claim 15 wherein the concentrated, medial and ~~inward~~posterior traction member is adjustable to increase or decrease an amount of inward pressure.
20. (currently amended): The knee orthosis of claim 15 wherein the concentrated, medial and ~~inward~~posterior traction member provides continuous compressive force against the patella throughout a full range of extension motion of an associated knee.
21. (original): The knee orthosis of claim 15 wherein the continuous compressive force is substantially the same throughout the extension motion.
22. (original): The knee orthosis of claim 15 further comprising a polycentric hinge having an axis that maintains a parallel position with respect to an associated knee throughout a flexion or extension motion of the knee.
23. (currently amended): The knee orthosis of claim 22 wherein the polycentric hinge is bicentric and the concentrated, medial and ~~inward~~posterior traction member is operatively attached to the hinge and aligned substantially perpendicular to the hinge axis.
24. (currently amended): The knee orthosis of claim 23 wherein the concentrated, medial and ~~inward~~posterior traction member is mounted on the hinge, or operatively loops through a ring that is aligned parallel to the hinge axis.
25. (currently amended): The knee orthosis of claim 15 further comprising an elastic, breathable sleeve having attachment positions for anchoring and adjusting a medial tracking member and the concentrated, medial and ~~inward~~posterior traction member.
26. (currently amended): The knee orthosis of claim 15 wherein the concentrated, medial and ~~inward~~posterior traction member comprises an elastic strap.

27. (currently amended): An orthotic method for tracking a patella, comprising:
applying a medial tracking member that operatively fits along a lateral side of, and provides medial traction to, a patella having patellofemoral articular tissue; and
applying a concentrated, medial and ~~inwardposterior~~ traction member that operatively fits over, and provides concentrated, medial and ~~inwardposterior~~ pressure against, the patella;
wherein the medial and ~~inwardposterior~~ traction member provides a compressive force against the patella, thereby increasing the contact surface area between the patellofemoral articular tissue and an associated femoral trochlear groove.
28. (currently amended): The method of claim 27 wherein the inward pressure is applied through an intermittent and progressively increased tightening of the concentrated, medial and ~~inwardposterior~~ traction member.
29. (currently amended): The method of claim 28 wherein the medial traction applied through the intermittent and progressively increased tightening of the concentrated, medial and ~~inwardposterior~~ traction member increasingly stretches lateral patellar connective tissue over time.
30. (cancelled)
31. (cancelled)
32. (currently amended): A knee orthosis, comprising:
a concentrated, medial and ~~inwardposterior~~ traction strap that operatively fits over, and provides concentrated, medial and ~~inwardposterior~~ pressure against, a patella having patellofemoral articular tissue;
wherein the concentrated, medial and ~~inwardposterior~~ traction strap provides a compressive force against the patella, thereby increasing the contact surface area between the patellofemoral articular tissue and an associated femoral trochlear groove.
33. (previously presented): The knee orthosis of claim 32 further comprising a medial tracking strap that operatively fits along a lateral side of, and provides medial traction to, the patella.
34. (currently amended): The knee orthosis of claim 33 wherein the concentrated, medial and ~~inwardposterior~~ traction strap directly overlays the patella and the medial tracking strap so that

medial traction can be placed on the patella.

35. (previously presented): The knee orthosis of claim 34 wherein the medial tracking strap is adjustable to increase or decrease an amount of medial traction.

36. (currently amended): The knee orthosis of claim 32 wherein the concentrated, medial and ~~inwardposterior~~ traction strap is adjustable to increase or decrease an amount of inward pressure.

37. (currently amended): The knee orthosis of claim 36 wherein the concentrated, medial and ~~inwardposterior~~ trac[[king]]tion strap provides continuous compressive force against the patella throughout a full range of extension motion of an associated knee.

38. (currently amended): The knee orthosis of claim 36 further comprising opposing lateral and medial hinges each having longitudinal axes that maintain a substantially parallel position with respect to an associated knee throughout a flexion or extension motion of the knee;

wherein a first opposing portion of the concentrated, medial and ~~inwardposterior~~ traction strap is operatively attached to the lateral hinge and a second opposing portion of the concentrated, medial and ~~inwardposterior~~ traction strap is operatively attached to the medial hinge, the concentrated, medial and ~~inwardposterior~~ traction strap being aligned substantially perpendicular to the longitudinal axes.

39. (currently amended): The knee orthosis of claim 38 further comprising an elastic, breathable sleeve having attachment positions for anchoring and adjusting the medial tracking strap and the concentrated, medial and ~~inwardposterior~~ traction strap.

40. (currently amended): An orthotic method for treating a patella, comprising:

applying a medial tracking strap that operatively fits along a lateral side of, and provides medial traction to, a patella having patellofemoral articular tissue; and

applying a concentrated, medial and ~~inwardposterior~~ traction strap that operatively fits over, and provides concentrated, medial and ~~inwardposterior~~ pressure against, the patella;

wherein the concentrated, medial and ~~inwardposterior~~ traction strap provides a compressive force against the patella, thereby increasing the contact surface area between the patellofemoral articular tissue and an associated femoral trochlear groove.